HITACHI

Projector

User's Manual - Operating Guide

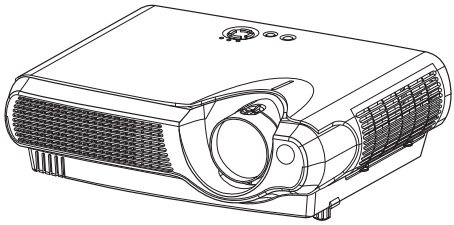
TECHNICAL

In this section, the technical information about this projector is described.

WARNING Before using, read the "User's Manual - Safety Guide" and these manuals to ensure correct usage through understanding. After reading, store them in a safe place for future reference.

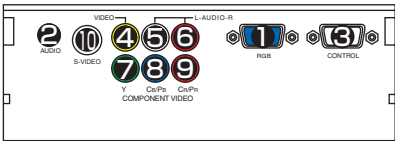
NOTE • The information in this manual is subject to change without notice.

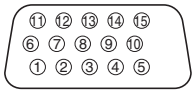
- The manufacturer assumes no responsibility for any errors that may appear in this manual.
- The reproduction, transmission or use of this document or contents is not permitted without express written authority.



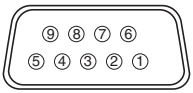
TECHNICAL

Signal Connectors

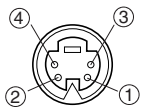


Port	Specification
❶ RGB 	Video signal: RGB separate, Analog, 0.7 Vp-p, 75 Ω terminator (positive) H/V. sync. signal:TTL level (positive/negative) Composite sync. signal: TTL level D-sub 15-pin shrink jack

No.	Signal	No.	Signal	No.	Signal
1	Video input Red	6	Ground Red	11	-
2	Video input Green	7	Ground Green	12	SDA (DDC)
3	Video input Blue	8	Ground Blue	13	H. sync./Composite sync.
4	-	9	Ground	14	Vertical sync
5	Ground	10	-	15	SCL (DDC)

❷ AUDIO (interlocked ❶ port)	200 mVrms, 50 kΩ (max. 3.0 Vp-p), Stereo mini jack
❸ CONTROL 	D-sub 9-pin plug

No.	Signal	No.	Signal	No.	Signal
1	-	4	-	7	RTS
2	RD	5	Ground	8	CTS
3	TD	6	-	9	-

❹ VIDEO	1.0 Vp-p, 75 Ω terminator, RCA jack
AUDIO ❺ L, ❻ R (interlocked ❹ / ❼ ❽ ❾ / ❿)	200 mVrms, 50 kΩ (max. 3.0 Vp-p), RCA jack
COMPONENT VIDEO ❼ Y, ❽ CB/PB, ❾ CR/PR	Y signal: 1.0 Vp-p, 75 Ω terminator CB/PB signal: 0.7 Vp-p, 75 Ω terminator CR/PR signal: 0.7 Vp-p, 75 Ω terminator
❿ S-VIDEO 	Mini Din 4-pin jack

No.	Signal
1	Color signal: 0.286 Vp-p (NTSC, burst), 75 Ω terminator Color signal: 0.300 Vp-p (PAL/SECAM, burst), 75 Ω terminator
2	Brightness signal: 1.0 Vp-p, 75 Ω terminator
3	Ground
4	Ground

Example Of Computer Signal

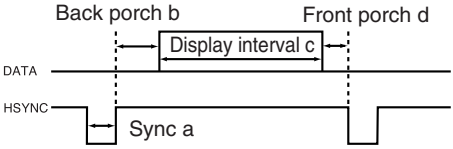
Resolution H × V	fH (kHz)	fV (Hz)	Rating	Signal mode	Display mode
720 × 400	37.9	85.0	VESA	TEXT	Zoom in
640 × 480	31.5	59.9	VESA	VGA (60Hz)	Zoom in
640 × 480	35.0	66.7		Mac13"mode	Zoom in
640 × 480	37.9	72.8	VESA	VGA (72Hz)	Zoom in
640 × 480	37.5	75.0	VESA	VGA (75Hz)	Zoom in
640 × 480	43.3	85.0	VESA	VGA (85Hz)	Zoom in
800 × 600	35.2	56.3	VESA	SVGA (56Hz)	
800 × 600	37.9	60.3	VESA	SVGA (60Hz)	
800 × 600	48.1	72.2	VESA	SVGA (72Hz)	
800 × 600	46.9	75.0	VESA	SVGA (75Hz)	
800 × 600	53.7	85.1	VESA	SVGA (85Hz)	
832 × 624	49.7	74.5		Mac16"mode	Zoom out
1024 × 768	48.4	60.0	VESA	XGA (60Hz)	Zoom out
1024 × 768	56.5	70.1	VESA	XGA (70Hz)	Zoom out
1024 × 768	60.0	75.0	VESA	XGA (75Hz)	Zoom out
1024 × 768	68.7	85.0	VESA	XGA (85Hz)	Zoom out
1152 × 864	67.5	75.0	VESA	SXGA (75Hz)	Zoom out
1280 × 960	60.0	60.0	VESA	SXGA (60Hz)	Zoom out
1280 × 1024	64.0	60.0	VESA	SXGA (60Hz)	Zoom out
1280 × 1024	80.0	75.0	VESA	SXGA (75Hz)	Zoom out
1280 × 1024	91.2	85.0	VESA	SXGA (85Hz)	Zoom out
1600 × 1200	75.0	60.0	VESA	UXGA (60Hz)	Zoom out

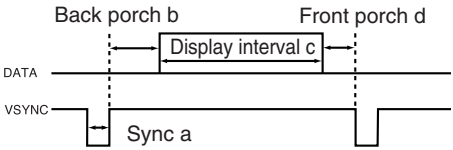
NOTE • Some computers may have multiple display screen modes. Use of some of these modes will not be possible with this projector.

- Be sure to check jack type, signal level, timing and resolution before connecting this projector to a computer.
- Depending on the input signal, full-size display may not be possible in some cases. Refer to the number of display pixels above.
- Although the projector can display signals with resolution up to UXGA (1,600 x 1,200), the signal will be converted to the projector's panel resolution before being displayed. The best display performance will be achieved if the resolutions of the input signal and projector panel are identical.
- The image may not be displayed correctly when the input sync. signal is "Composite Sync." or "Sync. on G".
- Automatically adjustment may not function correctly with some input signals.
- When the image resolution is changed on a computer, depending on an input, automatic adjust function may take some time and may not be completed. In this case, you may not be able to see a check box to select "Yes/No" for the new resolution on Windows. Then the resolution will go back to the original. It might be recommended to use other CRT or TFT monitors to change the resolution.

Initial Set Signals

The following signals are used for the initial settings.
The signal timing of some computer models may be different. In such case, refer to adjust the V.POSIT and H.POSIT of the menu.





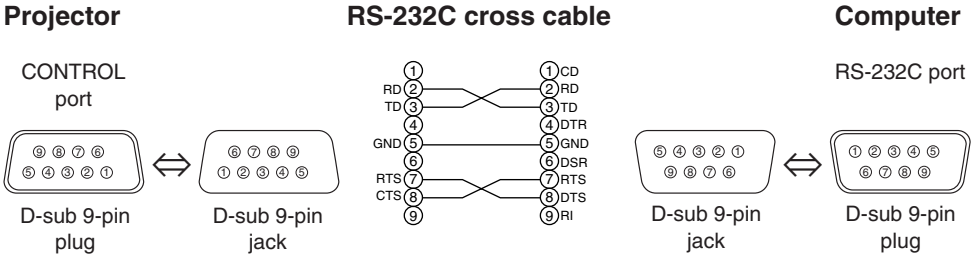
Computer / Signal	Horizontal signal timing (μs)			
	a	b	c	d
TEXT	2.0	3.0	20.3	1.0
VGA (60Hz)	3.8	1.9	25.4	0.6
Mac 13"mode	2.1	3.2	21.2	2.1
VGA (72Hz)	1.3	3.8	20.3	1.0
VGA (75Hz)	2.0	3.8	20.3	0.5
VGA (85Hz)	1.6	2.2	17.8	1.6
SVGA (56Hz)	2.0	3.6	22.2	0.7
SVGA (60Hz)	3.2	2.2	20.0	1.0
SVGA (72Hz)	2.4	1.3	16.0	1.1
SVGA (75Hz)	1.6	3.2	16.2	0.3
SVGA (85Hz)	1.1	2.7	14.2	0.6
Mac 16"mode	1.1	3.9	14.5	0.6
XGA (60Hz)	2.1	2.5	15.8	0.4
XGA (70Hz)	1.8	1.9	13.7	0.3
XGA (75Hz)	1.2	2.2	13.0	0.2
XGA (85Hz)	1.0	2.2	10.8	0.5
1152×864 (75Hz)	1.2	2.4	10.7	0.6
1280×960 (60Hz)	1.0	2.9	11.9	0.9
1280×1024 (60Hz)	1.0	2.3	11.9	0.4
1280×1024 (75Hz)	1.1	1.8	9.5	0.2
1280×1024 (85Hz)	1.0	1.4	8.1	0.4
1600×1200 (60Hz)	1.2	1.9	9.9	0.4

Computer / Signal	Vertical signal timimg (lines)			
	a	b	c	d
TEXT	3	42	400	1
VGA (60Hz)	2	33	480	10
Mac 13"mode	3	39	480	3
VGA (72Hz)	3	28	480	9
VGA (75Hz)	3	16	480	1
VGA (85Hz)	3	25	480	1
SVGA (56Hz)	2	22	600	1
SVGA (60Hz)	4	23	600	1
SVGA (72Hz)	6	23	600	37
SVGA (75Hz)	3	21	600	1
SVGA (85Hz)	3	27	600	1
Mac 16"mode	3	39	624	1
XGA (60Hz)	6	29	768	3
XGA (70Hz)	6	29	768	3
XGA (75Hz)	3	28	768	1
XGA (85Hz)	3	36	768	1
1152×864 (75Hz)	3	32	864	1
1280×960 (60Hz)	3	36	960	1
1280×1024 (60Hz)	3	38	1024	1
1280×1024 (75Hz)	3	37	1024	2
1280×1024 (85Hz)	3	44	1024	1
1600×1200 (60Hz)	3	46	1200	1

RS-232C Communication

Connecting The Cable

(1) Turn off the projector and the computer power supplies.
(2) Connect the CONTROL port of the projector with a RS-232C port of the computer by a RS-232C cable. Use the cable that fulfills the specification shown in the following figure.
(3) Turn on the computer power supply and after the computer has started up, turn on the projector power supply.



Communications Setting

19200bps, 8N1

1. Protocol

Consist of header (7 bytes) + command data (6 bytes).

2. Header

BE + EF + 03 + 06 + 00 + CRC_low + CRC_high
CRC_low : Lower byte of CRC flag for command data
CRC_high : Upper byte of CRC flag for command data

3 Command data

Command Data Chart

byte_0	byte_1	byte_2	byte_3	byte_4	byte_5
Action		Type		Setting code	
low	high	low	high	low	high

Action (byte_0 - 1)

Action	Classification	Content
1	SET	Change setting to desired value.
2	GET	Read projector internal setup value.
4	INCREMENT	Increment setup value by 1.
5	DECREMENT	Decrement setup value by 1.
6	EXECUTE	Run a command.

Requesting projector status (Get command)
(1) Send the request code Header + Command data ('02H'+'00H'+ type (2 bytes)+'00H'+'00H') from the computer to the projector.
(2) The projector returns the response code '1DH'+ data (2 bytes) to the computer.

Changing the projector settings (Set command)
(1) Send the setting code Header + Command data ('01H'+'00H'+ type (2 bytes) + setting code (2 bytes)) from the computer to the projector.
(2) The projector changes the setting based on the above setting code.
(3) The projector returns the response code '06H' to the computer.

Using the projector default settings (Reset Command)
(1) The computer sends the default setting code Header + Command data ('06H'+'00H'+ type (2 bytes) +'00H'+'00H') to the projector.
(2) The projector changes the specified setting to the default value.
(3) The projector returns the response code '06H' to the computer.

Increasing the projector setting value (Increment command)
(1) The computer sends the increment code Header + Command data ('04H'+'00H'+ type (2 bytes) +'00H'+'00H') to the projector.
(2) The projector in creases the setting value on the above setting code.
(3) The projector returns the response code '06H' to the computer.

Decreasing the projector setting value (Decrement command)
(1) The computer sends the decrement code Header + Command data ('05H'+'00H'+ type (2 bytes) +'00H' + '00H') to the projector.
(2) The projector decreases the setting value on the above setting code.
(3) The projector returns the response code '06H' to the computer.

When the projector cannot understand the received command
When the projector cannot understand the received command, the error code '15H' is sent back to the computer.
Sometimes the projector cannot properly receive the command. In such a case, the command is not executed and the error code '15H' is sent back to the computer. If this error code is returned, send the same command again.

When the projector cannot execute the received command.
When the projector cannot execute the received command, the error code '1cH' + 'xxxxH' is sent back to the computer. When the data length is greater than indicated by the data length code, the projector ignore the excess data code.
Conversely when the data length is shorter than indicated by the data length code, an error code will be returned to the computer.

NOTE • Operation cannot be guaranteed when the projector receives an undefined command or data.
- Provide an interval of at least 40ms between the response code and any other code.
- The projector outputs test data when the power supply is switched ON, and when the lamp is lit. Ignore this data.
- Commands are not accepted during warm-up.

Command Data Chart

Names	Operation type		Header			CRC	Command data		
							Action	Type	Setting code
Keystone	Get		BE EF	03	06 00	B9 D3	02 00	07 20	00 00
	Increment		BE EF	03	06 00	DF D3	04 00	07 20	00 00
	Decrement		BE EF	03	06 00	0E D2	05 00	07 20	00 00
Keystone Reset	Execute		BE EF	03	06 00	08 D0	06 00	0C 70	00 00
Brightness	Get		BE EF	03	06 00	89 D2	02 00	03 20	00 00
	Increment		BE EF	03	06 00	EF D2	04 00	03 20	00 00
	Decrement		BE EF	03	06 00	3E D3	05 00	03 20	00 00
Brightness Reset	Execute		BE EF	03	06 00	58 D3	06 00	00 70	00 00
Contrast	Get		BE EF	03	06 00	FD D3	02 00	04 20	00 00
	Increment		BE EF	03	06 00	9B D3	04 00	04 20	00 00
	Decrement		BE EF	03	06 00	4A D2	05 00	04 20	00 00
Contrast Reset	Execute		BE EF	03	06 00	A4 D2	06 00	01 70	00 00
Aspect	Set	4:3	BE EF	03	06 00	9E D0	01 00	08 20	00 00
		16:9	BE EF	03	06 00	0E D1	01 00	08 20	01 00
		15:9	BE EF	03	06 00	6E D0	01 00	08 20	03 00
		32:15	BE EF	03	06 00	5E D2	01 00	08 20	04 00
		WIDE	BE EF	03	06 00	CE D3	01 00	08 20	05 00
		ZOOM	BE EF	03	06 00	3E D3	01 00	08 20	06 00
	Get		BE EF	03	06 00	AD D0	02 00	08 20	00 00
Whisper	Set	NORMAL	BE EF	03	06 00	3B 23	01 00	00 33	00 00
		WHISPER	BE EF	03	06 00	AB 22	01 00	00 33	01 00
	Get		BE EF	03	06 00	08 23	02 00	00 33	00 00
Mirror	Set	Normal	BE EF	03	06 00	C7 D2	01 00	01 30	00 00
		H Inverse	BE EF	03	06 00	57 D3	01 00	01 30	01 00
		V Inverse	BE EF	03	06 00	A7 D3	01 00	01 30	02 00
		H&V Inverse	BE EF	03	06 00	37 D2	01 00	01 30	03 00
	Get		BE EF	03	06 00	F4 D2	02 00	01 30	00 00

Command Data Chart (continued)

Names	Operation type		Header			CRC	Command data		
							Action	Type	Setting code
Language	Set	English	BE EF	03	06 00	F7 D3	01 00	05 30	00 00
		FRANÇAIS	BE EF	03	06 00	67 D2	01 00	05 30	01 00
		Deutsch	BE EF	03	06 00	97 D2	01 00	05 30	02 00
		ESPAÑOL	BE EF	03	06 00	07 D3	01 00	05 30	03 00
		Italiano	BE EF	03	06 00	37 D1	01 00	05 30	04 00
		Norsk	BE EF	03	06 00	A7 D0	01 00	05 30	05 00
		Nederlands	BE EF	03	06 00	57 D0	01 00	05 30	06 00
		PORTUGUÊS	BE EF	03	06 00	C7 D1	01 00	05 30	07 00
		日本語	BE EF	03	06 00	37 D4	01 00	05 30	08 00
		中文	BE EF	03	06 00	A7 D5	01 00	05 30	09 00
		한글	BE EF	03	06 00	57 D5	01 00	05 30	0A 00
		SVENSKA	BE EF	03	06 00	C7 D4	01 00	05 30	0B 00
		РУССКИЙ	BE EF	03	06 00	F7 D6	01 00	05 30	0C 00
		SUOMI	BE EF	03	06 00	67 D7	01 00	05 30	0D 00
		POLSKI	BE EF	03	06 00	97 D7	01 00	05 30	0E 00
	Get		BE EF	03	06 00	C4 D3	02 00	05 30	00 00
Gamma	Set	NORMAL	BE EF	03	06 00	C7 F0	01 00	A1 30	00 00
		CINEMA	BE EF	03	06 00	57 F1	01 00	A1 30	01 00
		DYNAMIC	BE EF	03	06 00	A7 F1	01 00	A1 30	02 00
		CUSTOM	BE EF	03	06 00	07 FD	01 00	A1 30	10 00
	Get		BE EF	03	06 00	F4 F0	02 00	A1 30	00 00
Custom Gamma	Get		BE EF	03	06 00	08 F1	02 00	A0 30	00 00
	Increment		BE EF	03	06 00	6E F1	04 00	A0 30	00 00
	Decrement		BE EF	03	06 00	BF F0	05 00	A0 30	00 00
Custom Color Temp	Set	USER	BE EF	03	06 00	3B F8	01 00	B0 30	10 00
		HIGH	BE EF	03	06 00	0B F5	01 00	B0 30	03 00
		MIDDLE	BE EF	03	06 00	9B F4	01 00	B0 30	02 00
		LOW	BE EF	03	06 00	6B F4	01 00	B0 30	01 00
	Get		BE EF	03	06 00	C8 F5	02 00	B0 30	00 00
Custom User R	Set	50	BE EF	03	06 00	57 F7	01 00	B1 30	05 00
		60	BE EF	03	06 00	C7 F6	01 00	B1 30	04 00
		70	BE EF	03	06 00	F7 F4	01 00	B1 30	03 00
		80	BE EF	03	06 00	67 F5	01 00	B1 30	02 00
		90	BE EF	03	06 00	97 F5	01 00	B1 30	01 00
		100	BE EF	03	06 00	07 F4	01 00	B1 30	00 00
	Get		BE EF	03	06 00	34 F4	02 00	B1 30	00 00
Custom User G	Set	50	BE EF	03	06 00	13 F7	01 00	B2 30	05 00
		60	BE EF	03	06 00	83 F6	01 00	B2 30	04 00
		70	BE EF	03	06 00	B3 F4	01 00	B2 30	03 00
		80	BE EF	03	06 00	23 F5	01 00	B2 30	02 00
		90	BE EF	03	06 00	D3 F5	01 00	B2 30	01 00
		100	BE EF	03	06 00	43 F4	01 00	B2 30	00 00
	Get		BE EF	03	06 00	70 F4	02 00	B2 30	00 00

Command Data Chart (continued)

Names	Operation type		Header			CRC	Command data		
							Action	Type	Setting code
Custom User B	Set	50	BE EF	03	06 00	EF F6	01 00	B3 30	05 00
		60	BE EF	03	06 00	7F F7	01 00	B3 30	04 00
		70	BE EF	03	06 00	4F F5	01 00	B3 30	03 00
		80	BE EF	03	06 00	DF F4	01 00	B3 30	02 00
		90	BE EF	03	06 00	2F F4	01 00	B3 30	01 00
		100	BE EF	03	06 00	BF F5	01 00	B3 30	00 00
	Get		BE EF	03	06 00	8C F5	02 00	B3 30	00 00
Color Balance R	Get		BE EF	03	06 00	01 D2	02 00	05 20	00 00
	Increment		BE EF	03	06 00	67 D2	04 00	05 20	00 00
	Decrement		BE EF	03	06 00	B6 D3	05 00	05 20	00 00
Color Balance R Reset	Execute		BE EF	03	06 00	94 D3	06 00	05 70	00 00
Color Balance G	Get		BE EF	03	06 00	B5 D7	02 00	12 20	00 00
	Increment		BE EF	03	06 00	D3 D7	04 00	12 20	00 00
	Decrement		BE EF	03	06 00	02 D6	05 00	12 20	00 00
Color Balance G Reset	Execute		BE EF	03	06 00	04 DB	06 00	29 70	00 00
Color Balance B	Get		BE EF	03	06 00	45 D2	02 00	06 20	00 00
	Increment		BE EF	03	06 00	23 D2	04 00	06 20	00 00
	Decrement		BE EF	03	06 00	F2 D3	05 00	06 20	00 00
Color Balance B Reset	Execute		BE EF	03	06 00	D0 D3	06 00	06 70	00 00
Sharpness	Get		BE EF	03	06 00	F1 72	02 00	01 22	00 00
	Increment		BE EF	03	06 00	97 72	04 00	01 22	00 00
	Decrement		BE EF	03	06 00	46 73	05 00	01 22	00 00
Sharpness Reset	Execute		BE EF	03	06 00	C4 D0	06 00	09 70	00 00
Color	Get		BE EF	03	06 00	B5 72	02 00	02 22	00 00
	Increment		BE EF	03	06 00	D3 72	04 00	02 22	00 00
	Decrement		BE EF	03	06 00	02 73	05 00	02 22	00 00
Color Reset	Execute		BE EF	03	06 00	80 D0	06 00	0A 70	00 00
Tint	Get		BE EF	03	06 00	49 73	02 00	03 22	00 00
	Increment		BE EF	03	06 00	2F 73	04 00	03 22	00 00
	Decrement		BE EF	03	06 00	FE 72	05 00	03 22	00 00
Tint Reset	Execute		BE EF	03	06 00	7C D1	06 00	0B 70	00 00
My Memory Load	Set	1	BE EF	03	06 00	0E D7	01 00	14 20	00 00
		2	BE EF	03	06 00	9E D6	01 00	14 20	00 01
		3	BE EF	03	06 00	6E D6	01 00	14 20	02 00
		4	BE EF	03	06 00	FE D7	01 00	14 20	03 00
My Memory Save	Set	1	BE EF	03	06 00	F2 D6	01 00	15 20	00 00
		2	BE EF	03	06 00	62 D7	01 00	15 20	01 00
		3	BE EF	03	06 00	92 D7	01 00	15 20	02 00
		4	BE EF	03	06 00	02 D6	01 00	15 20	03 00

Command Data Chart (continued)

Names	Operation type		Header			CRC	Command data		
							Action	Type	Setting code
V Position	Get		BE EF	03	06 00	0D 83	02 00	00 21	00 00
	Increment		BE EF	03	06 00	6B 83	04 00	00 21	00 00
	Decrement		BE EF	03	06 00	BA 82	05 00	00 21	00 00
V Position Reset	Execute		BE EF	03	06 00	E0 D2	06 00	02 70	00 00
H Position	Get		BE EF	03	06 00	F1 82	02 00	01 21	00 00
	Increment		BE EF	03	06 00	97 82	04 00	01 21	00 00
	Decrement		BE EF	03	06 00	46 83	05 00	01 21	00 00
H Position Reset	Execute		BE EF	03	06 00	1C D3	06 00	03 70	00 00
H Phase	Get		BE EF	03	06 00	49 83	02 00	03 21	00 00
	Increment		BE EF	03	06 00	2F 83	04 00	03 21	00 00
	Decrement		BE EF	03	06 00	FE 82	05 00	03 21	00 00
H Size	Get		BE EF	03	06 00	B5 82	02 00	02 21	00 00
	Increment		BE EF	03	06 00	D3 82	04 00	02 21	00 00
	Decrement		BE EF	03	06 00	02 83	05 00	02 21	00 00
H Size Reset	Execute		BE EF	03	06 00	68 D2	06 00	04 70	00 00
Over Scan	Get		BE EF	03	06 00	91 70	02 00	09 22	00 00
	Increment		BE EF	03	06 00	F7 70	04 00	09 22	00 00
	Decrement		BE EF	03	06 00	26 71	05 00	09 22	00 00
Over Scan Reset	Execute		BE EF	03	06 00	EC D9	06 00	27 70	00 00
Color Space	Set	AUTO	BE EF	03	06 00	0E 72	01 00	04 22	00 00
		RGB	BE EF	03	06 00	9E 73	01 00	04 22	01 00
		SMPTE240	BE EF	03	06 00	6E 73	01 00	04 22	02 00
		REC709	BE EF	03	06 00	FE 72	01 00	04 22	03 00
		REC601	BE EF	03	06 00	CE 70	01 00	04 22	04 00
	Get		BE EF	03	06 00	3D 72	02 00	04 22	00 00
Component	Set	COMPONENT	BE EF	03	06 00	4A D7	01 00	17 20	00 00
		SCART RGB	BE EF	03	06 00	DA D6	01 00	17 20	01 00
	Get		BE EF	03	06 00	79 D7	02 00	17 20	00 00
Video Format	Set	AUTO	BE EF	03	06 00	9E 75	01 00	00 22	0A 00
		NTSC	BE EF	03	06 00	FE 71	01 00	00 22	04 00
		PAL	BE EF	03	06 00	6E 70	01 00	00 22	05 00
		SECAM	BE EF	03	06 00	6E 75	01 00	00 22	09 00
		NTSC 4.43	BE EF	03	06 00	5E 72	01 00	00 22	02 00
		M-PAL	BE EF	03	06 00	FE 74	01 00	00 22	08 00
		N-PAL	BE EF	03	06 00	0E 71	01 00	00 22	07 00
	Get		BE EF	03	06 00	0D 73	02 00	00 22	00 00
Frame Lock	Set	TURN OFF	BE EF	03	06 00	CB D6	01 00	14 30	00 00
		TURN ON	BE EF	03	06 00	5B D7	01 00	14 30	01 00
	Get		BE EF	03	06 00	F8 D6	02 00	14 30	00 00
3D-YCS	Set	TURN OFF	BE EF	03	06 00	E6 70	01 00	0A 22	00 00
		NORMAL	BE EF	03	06 00	76 71	01 00	0A 22	01 00
		STILL IMAGE	BE EF	03	06 00	86 71	01 00	0A 22	02 00
	Get		BE EF	03	06 00	D5 70	02 00	0A 22	00 00

Command Data Chart (continued)

Names	Operation type		Header			CRC	Command data		
							Action	Type	Setting code
Video NR	Set	LOW	BE EF	03	06 00	26 72	01 00	06 22	01 00
		MIDDLE	BE EF	03	06 00	D6 72	01 00	06 22	02 00
		HIGH	BE EF	03	06 00	46 73	01 00	06 22	03 00
	Get		BE EF	03	06 00	85 73	02 00	06 22	00 00
Progressive	Set	Turn off	BE EF	03	06 00	4A 72	01 00	07 22	00 00
		TV	BE EF	03	06 00	DA 73	01 00	07 22	01 00
		Film	BE EF	03	06 00	2A 73	01 00	07 22	02 00
	Get		BE EF	03	06 00	79 72	02 00	07 22	00 00
S2-Aspect	Set	TURN OFF	BE EF	03	06 00	1A 71	01 00	0B 22	00 00
		TURN ON	BE EF	03	06 00	8A 70	01 00	0B 22	01 00
	Get		BE EF	03	06 00	29 71	01 00	0B 22	00 00
Auto Adjust	Execute		BE EF	03	06 00	91 D0	06 00	0A 20	00 00
Auto off	Get		BE EF	03	06 00	08 86	02 00	10 31	00 00
	Increment		BE EF	03	06 00	6E 86	04 00	10 31	00 00
	Decrement		BE EF	03	06 00	BF 87	05 00	10 31	00 00
Auto Search	Set	TURN OFF	BE EF	03	06 00	B6 D6	01 00	16 20	00 00
		TURN ON	BE EF	03	06 00	26 D7	01 00	16 20	01 00
	Get		BE EF	03	06 00	85 D6	02 00	16 20	00 00
Blank Color	Set	Blue	BE EF	03	06 00	CB D3	01 00	00 30	03 00
		White	BE EF	03	06 00	6B D0	01 00	00 30	05 00
		Black	BE EF	03	06 00	9B D0	01 00	00 30	06 00
	Get		BE EF	03	06 00	08 D3	02 00	00 30	00 00
Blank on/off	Set	TURN OFF	BE EF	03	06 00	FB D8	01 00	20 30	00 00
		TURN ON	BE EF	03	06 00	6B D9	01 00	20 30	01 00
	Get		BE EF	03	06 00	C8 D8	02 00	20 30	00 00
Startup	Set	TURN ON	BE EF	03	06 00	0B D2	01 00	04 30	00 00
		TURN OFF	BE EF	03	06 00	9B D3	01 00	04 30	01 00
	Get		BE EF	03	06 00	38 D2	02 00	04 30	00 00
Menu Position V	Get		BE EF	03	06 00	40 D7	02 00	16 30	00 00
	Increment		BE EF	03	06 00	26 D7	04 00	16 30	00 00
	Decrement		BE EF	03	06 00	F7 D6	05 00	16 30	00 00
Menu Position V Reset	Execute		BE EF	03	06 00	A8 C7	06 00	44 70	00 00
Menu Position H	Get		BE EF	03	06 00	04 D7	02 00	15 30	00 00
	Increment		BE EF	03	06 00	62 D7	04 00	15 30	00 00
	Decrement		BE EF	03	06 00	B3 D6	05 00	15 30	00 00
Menu Position H Reset	Execute		BE EF	03	06 00	DC C6	06 00	43 70	00 00
Message	Set	TURN OFF	BE EF	03	06 00	8F D6	01 00	17 30	00 00
		TURN ON	BE EF	03	06 00	1F D7	01 00	17 30	01 00
	Get		BE EF	03	06 00	BC D6	02 00	17 30	00 00

Command Data Chart (continued)

Names	Operation type		Header	CRC	Command data		
					Action	Type	Setting code
Volume	Get		BE EF 03 06 00	31 D3	02 00	01 20	00 00
	Increment		BE EF 03 06 00	57 D3	04 00	01 20	00 00
	Decrement		BE EF 03 06 00	86 D2	05 00	01 20	00 00
MUTE	Set	TURN ON	BE EF 03 06 00	46 D3	01 00	02 20	00 00
		TURN OFF	BE EF 03 06 00	D6 D2	01 00	02 20	01 00
	Get		BE EF 03 06 00	75 D3	02 00	02 20	00 00
Screen type	Set	4:3	BE EF 03 06 00	7A D6	01 00	01 00	00 00
		16:9- Top	BE EF 03 06 00	EA D7	01 00	13 20	01 00
		16:9- Center	BE EF 03 06 00	1A D7	01 00	01 00	02 00
		16:9- Bottom	BE EF 03 06 00	8A D6	01 00	13 20	03 00
	Get		BE EF 03 06 00	49 D6	02 00	01 00	00 00
Lamp Time	Get		BE EF 03 06 00	C2 FF	02 00	90 10	00 00
Lamp Time Reset	Execute		BE EF 03 06 00	58 DC	06 00	30 70	00 00
Filter Time	Get		BE EF 03 06 00	C2 F0	02 00	A0 10	00 00
Filter Time Reset	Execute		BE EF 03 06 00	98 C6	06 00	40 70	00 00
Magnify	Get		BE EF 03 06 00	7C D2	02 00	07 30	00 00
	Increment		BE EF 03 06 00	1A D2	04 00	07 30	00 00
	Decrement		BE EF 03 06 00	CB D3	05 00	07 30	00 00
Freeze	Set	Normal	BE EF 03 06 00	83 D2	01 00	02 30	00 00
		Freeze	BE EF 03 06 00	13 D3	01 00	02 30	01 00
	Get		BE EF 03 06 00	B0 D2	02 00	02 30	00 00
Power	Set	TURN OFF	BE EF 03 06 00	2A D3	01 00	00 60	00 00
		TURN ON	BE EF 03 06 00	BA D2	01 00	00 60	01 00
	Get		BE EF 03 06 00	19 D3	02 00	00 60	00 00
			(Example Return) 00 00 (Off) 01 00 (On) 02 00 (Cool down)				
Input Source	Set	RGB	BE EF 03 06 00	FE D2	01 00	00 20	00 00
		Video	BE EF 03 06 00	6E D3	01 00	00 20	01 00
		S-Video	BE EF 03 06 00	9E D3	01 00	00 20	02 00
		Component	BE EF 03 06 00	AE D1	01 00	00 20	05 00
	Get		BE EF 03 06 00	CD D2	02 00	00 20	00 00
Error Status	Get		BE EF 03 06 00	D9 D8	02 00	20 60	00 00
			(Example of Return) 00 00 (Normal) 01 00 (Cover-error) 02 00 (Fan-error) 03 00 (Lamp-error) 04 00 (Temp-error) 05 00 (Air flow-error) 06 00 (Lamp-Time-over) 07 00 (Cool-error) 08 00 (Filter-Error) 09 00 (Filter-Missing)				